

IN THE CLAIMS:

1-4. (Cancelled) .

5. (Currently Amended) A method comprising:

determining that fibrillation is occurring in a heart of a person;

defibrillating the heart without applying shock pulses by:

applying electrical pulses to the heart at a rate greater than about 10 Hz,
with a peak power that is less than about 100 W, wherein applying the pulses
comprises applying a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the steps of applying and
terminating the electrical pulses effectuate defibrillation of the heart; [[and]]

sensing motion of the heart, wherein applying the pulses comprises modifying a
characteristic of at least some of the pulses applied to the heart responsive to the sensed
motion; and

pacing the heart at approximately 1 Hz while applying the electrical pulses at the
rate greater than about 10 Hz.

6. (Currently Amended) A method comprising:

determining that fibrillation is occurring in a heart of a person;

defibrillating the heart without applying shock pulses by:

applying electrical pulses to the heart at a rate greater than about 10 Hz,
with a peak power that is less than about 100 W, wherein applying the pulses
comprises applying a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the steps of applying and
terminating the electrical pulses effectuate defibrillation of the heart; [[and]]

inhibiting propagation of an activation wave in the heart while applying the
electrical pulses, by applying a fencing signal to the heart; and

pacing the heart at approximately 1 Hz while applying the electrical pulses at the rate greater than about 10 Hz.

7. (Cancelled).

8. (Previously Presented) A method comprising:
determining that fibrillation is occurring in a heart of a person;
defibrillating the heart without applying shock pulses by:

applying electrical pulses to the heart at a rate greater than about 10 Hz,
with a peak power that is less than about 100 W, wherein applying the pulses
comprises applying a pulse having an amplitude less than about 50 mA, and
terminating the electrical pulses, whereby the steps of applying and
terminating the electrical pulses effectuate defibrillation of the heart; and
pacing the heart at approximately 1 Hz while applying the electrical pulses at the
rate greater than about 10 Hz.

9-11. (Cancelled).

12. (Currently Amended) A method comprising:
determining that fibrillation is occurring in a heart of a person; and
defibrillating the heart without applying shock pulses by:

applying electrical pulses to the heart at a rate greater than about 10 Hz,
with a peak power that is less than about 100 W, wherein applying the pulses
comprises applying a pulse having an amplitude less than about 50 mA, and
terminating the electrical pulses, whereby the steps of applying and
terminating the electrical pulses effectuate defibrillation of the heart,
wherein applying the pulses comprises applying respective signals at a plurality of
sites on the heart; [[and]]

wherein applying the signals comprises applying a first waveform at a first one of the sites and applying a second waveform, which differs from the first waveform, at a second one of the sites; and

pacing the heart at approximately 1 Hz while applying the electrical pulses at the rate greater than about 10 Hz.

13. (Cancelled).

14. (Currently Amended) A method comprising:

determining that fibrillation is occurring in a heart of a person; and

defibrillating the heart without applying shock pulses by:

applying electrical pulses to the heart at a rate greater than about 10 Hz, with a peak power that is less than about 100 W, wherein applying the pulses comprises applying a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the steps of applying and terminating the electrical pulses effectuate defibrillation of the heart,

wherein applying the pulses comprises inducing depolarization in at least a region of the heart by applying the pulses; [[and]]

wherein applying the pulses comprises inducing a depolarization of substantially all excitable contractile tissue of the heart by applying the pulses; and

pacing the heart at approximately 1 Hz while applying the electrical pulses at the rate greater than about 10 Hz.

15-33. (Cancelled).

34. (Currently Amended) A method comprising:

determining that ventricular fibrillation is occurring in a heart of a person; and

defibrillating the heart without applying shock pulses by:

applying an electrical signal to the heart with a total energy of no more than about 1 joule, and

terminating the electrical signal, whereby the steps of applying and terminating the electrical signal effectuate defibrillation of the heart, wherein applying the signal comprises applying the signal in two or more bursts of signal application; and
pacing the heart at approximately 1 Hz while applying the electrical signal.

35. (Previously Presented) A method comprising:

determining that ventricular fibrillation is occurring in a heart of a person;
defibrillating the heart without applying shock pulses by:

applying an electrical signal to the heart with a total energy of no more than about 1 joule, and

terminating the electrical signal, whereby the steps of applying and terminating the electrical signal effectuate defibrillation of the heart; and
pacing the heart at approximately 1 Hz while applying the electrical signal.

36-38. (Cancelled).

39. (Currently Amended) A method comprising:

determining that ventricular fibrillation is occurring in a heart of a person; and
defibrillating the heart without applying shock pulses by:

applying an electrical signal to the heart with a total energy of no more than about 1 joule, and

terminating the electrical signal, whereby the steps of applying and terminating the electrical signal effectuate defibrillation of the heart, wherein applying the signal comprises applying respective signals at a plurality of sites on the heart, [[and]]

wherein applying the signals comprises applying a first waveform at a first one of the sites and applying a second waveform, which differs from the first waveform, at a second one of the sites; and

 pacing the heart at approximately 1 Hz while applying the electrical signal.

40-43. (Cancelled).

44. (Currently Amended) A method comprising:

 determining that ventricular fibrillation is occurring in a heart of a person; and
 defibrillating the heart without applying shock pulses by:

 applying an electrical signal to the heart with a total energy of no more than about 1 joule, and

 terminating the electrical signal, whereby the steps of applying and
terminating the electrical signal effectuate defibrillation of the heart,

 wherein applying the signal comprises applying to the heart electrical pulses at a first frequency, [[and]]

 wherein terminating the electrical signal comprises reducing the frequency to a second frequency; and

 pacing the heart at approximately 1 Hz while applying the electrical signal.

45-48. (Cancelled) .

49. (Currently Amended) Apparatus for defibrillating a heart of a person, comprising:

 one or more electrodes, adapted to be coupled to the heart;

 a control unit, adapted to determine that fibrillation is occurring in the heart, and
 defibrillate the heart without applying shock pulses by:

driving the electrodes to apply electrical pulses to the heart at a rate greater than about 10 Hz, with a peak power that is less than about 100 W, wherein the control unit is adapted to drive at least one of the electrodes to apply a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the applying and terminating of the electrical pulses effectuates defibrillation of the heart; [[and]]

a sensor, adapted to sense motion of the heart and to convey a sensor signal responsive thereto to the control unit, wherein the control unit is adapted to modify a characteristic of at least some of the pulses applied to the heart responsive to the sensor signal; and

a pacing electrode, adapted to be coupled to the heart, wherein the control unit is adapted to drive the pacing electrode to pace the heart at approximately 1 Hz, while concurrently driving the one or more electrodes to apply the electrical pulses.

50. (Currently Amended) Apparatus for defibrillating a heart of a person, comprising:

one or more electrodes, adapted to be coupled to the heart;

a control unit, adapted to determine that fibrillation is occurring in the heart, and defibrillate the heart without applying shock pulses by:

driving the electrodes to apply electrical pulses to the heart at a rate greater than about 10 Hz, with a peak power that is less than about 100 W, wherein the control unit is adapted to drive at least one of the electrodes to apply a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the applying and terminating of the electrical pulses effectuates defibrillation of the heart; [[and]]

a fencing electrode, adapted to be coupled to the heart, wherein the control unit is adapted to drive the fencing electrode to inhibit propagation of an activation wave in the

heart, by applying a pacing signal to the heart, while concurrently driving the one or more electrodes to apply the electrical pulses; and

a pacing electrode, adapted to be coupled to the heart, wherein the control unit is adapted to drive the pacing electrode to pace the heart at approximately 1 Hz, while concurrently driving the one or more electrodes to apply the electrical pulses.

51. (Cancelled).

52. (Previously Presented) Apparatus for defibrillating a heart of a person, comprising:

one or more electrodes, adapted to be coupled to the heart;

a control unit, adapted to determine that fibrillation is occurring in the heart, and defibrillate the heart without applying shock pulses by:

driving the electrodes to apply electrical pulses to the heart at a rate greater than about 10 Hz, with a peak power that is less than about 100 W, wherein the control unit is adapted to drive at least one of the electrodes to apply a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the applying and terminating of the electrical pulses effectuates defibrillation of the heart; and

a pacing electrode, adapted to be coupled to the heart, wherein the control unit is adapted to drive the pacing electrode to pace the heart at approximately 1 Hz, while concurrently driving the one or more electrodes to apply the electrical pulses.

53. (Currently Amended) Apparatus for defibrillating a heart of a person, comprising:

one or more electrodes, adapted to be coupled to the heart; and

a control unit, adapted to determine that fibrillation is occurring in the heart, and defibrillate the heart without applying shock pulses by:

driving the electrodes to apply electrical pulses to the heart at a rate greater than about 10 Hz, with a peak power that is less than about 100 W, wherein the control unit is adapted to drive at least one of the electrodes to apply a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the applying and terminating of the electrical pulses effectuates defibrillation of the heart,

wherein the one or more electrodes comprise first and second electrodes, and wherein the control unit is adapted to drive the first electrode to apply a first waveform at a first site of the heart, and is adapted to drive the second electrode to apply a second waveform, which differs from the first waveform, at a second site of the heart; and

a pacing electrode, adapted to be coupled to the heart, wherein the control unit is adapted to drive the pacing electrode to pace the heart at approximately 1 Hz, while concurrently driving the one or more electrodes to apply the electrical pulses.

54-85. (Cancelled).